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The status of the type material of *Pycnostigmus rostratus* Cameron (Hymenoptera, Figitidae, Pycnostigminae)

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The status of the type material of *Pycnostigmus rostratus* Cameron is reviewed. There are two types: a lectotype in the Natural History Museum, London, and a paralectotype in the South African Museum, Cape Town.

Keywords: *Pycnostigmus rostratus*; Hymenoptera; Figitidae; Pycnostigminae types

Introduction

A recent paper by Buffington and van Noort (2007), revising world Pycnostigminae, prompted a more detailed investigation of the type material of *Pycnostigmus rostratus* Cameron, to clarify which specimens are actually types and their type status. Cameron described *P. rostratus* in 1905, basing his description on an unspecified number of females collected at Cape Town in September 1905 and deposited at (or originating from) the South African Museum (SAM). Type material was later referred to by Weld (1952) who wrote ‘The type female of *rostratus* from Cape Town is in the British Museum.’ Weld did not mention any specimens in the SAM. More recently Buffington and van Noort (2007) mentioned two type specimens, a ‘holotype’ in the SAM and a ‘paratype’ in the Natural History Museum, London (BMNH), stating that the SAM specimen was the holotype because the original description was based on a single specimen and the label data on the SAM specimen matched the original description (ICZN 1999: Art. 73.1.1). Clearly, the BMNH specimen could not be a paratype if the only type specimen was at SAM, so the status of the type material needed to be clarified. Here we review the evidence and provide a reappraisal of the status of the type material of *P. rostratus*.

Methods

Both specimens were re-examined, together with the original description and papers relating to putative types (Cameron 1905; Weld 1952; Buffington and van Noort 2007) as well as sources on Cameron’s life and taxonomic practice (Anon 1913; G.M.W. 1913; Quinlan 1974) and archival material in the BMNH Entomology Library relating to the acquisition of the BMNH specimen (Entomology Accession Registers and Insect Room Lists).

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Results

It is not clear from Cameron's original description whether it was made from one or a number of specimens, and so both possibilities need to be considered. This may seem odd by twenty-first century standards especially since Cameron erected a new subfamily, Pycnostigminae, on the basis of this material; however, it was not unusual for Cameron to make descriptions without mentioning the numbers of specimens he had seen. According to Quinlan (1974), who studied many of Cameron's types to verify their status, 'There is usually no way of telling from Cameron's descriptions how many specimens he had before him when describing a new species; only very rarely did he state the number of specimens on which he based a description.' Obituaries of Cameron describe his prolific and chaotic publication record (Morley 1913); possibly this was made worse by his poverty and ill health (Anon 1913). Consequently, according to the ICZN (1999: recommendation 73F), in this situation it is best to proceed as though syntypes may exist.

The SAM specimen mentioned by Buffington and van Noort (2007) is clearly a syntype: it agrees with the original description, has Cameron's own handwritten type label, and is currently deposited at the SAM, which is mentioned in the original description as the repository or origin of the specimen (Figure 1).

Similarly the BMNH specimen mentioned by Weld (1952) is also a syntype. It agrees with the original description and has Cameron's own handwritten type label. Although it was initially thought never to have been part of the SAM, reference to



Figure 1. *Pycnostigmus rostratus* Cameron, 1905. (A,B) Lectotype female: (A) habitus and (B) labels; (C,D) *P. rostratus* paralectotype female: (C) habitus and (D) labels.

the archival material relating to its acquisition (BMNH: Entomology Accession Registers; Insects Room Lists) unambiguously shows that it was received as lot number 138 in 1906, and so could have been part of the SAM collection in or before 1905 when Cameron made his description. The most likely history of this specimen is that it was collected in Cape Town, passed to the SAM, sent to Cameron for description in 1905, retained by him following the common practice of '*desiderata*' and then donated to the BMNH in 1906. It was not unusual for Cameron to work on the collections of other museums in this way; he studied collections for many museums abroad, including institutions in South Africa (G.M.W. 1913). In addition, the specimen bears Cameron's type label, which is very similar to that on the SAM specimen, both labels were probably added at the same time, showing that the BMNH specimen was known to Cameron and recognized by him as *P. rostratus* when the nominal species was established (ICZN 1999: Art. 72.4.1.1). There is therefore no reason to believe that this specimen is not part of the type series.

A mention of 'the type' by Weld (1952) and the mention of a 'holotype' by Buffington and van Noort (2007) raised the question of whether there had been a type fixation, and if so, which of the two syntypes had been fixed. Weld wrote 'The type female of *rostratus* from Cape Town is in the British Museum,' and this is sufficient to fix the BMNH syntype as a lectotype by inference of 'the type' (ICZN 1999: Art. 74.6), clearly following all the provisions of this article: (1) since Weld considered the taxon was based on a single type specimen 'the type'; (2) the original description neither implies nor requires syntypes; (3) it is now considered here that the original description was based on more than one specimen; (4) Weld was the first to publish an inference that the taxon was based on a single type specimen 'the type' before 2000.

Pycnostigmus Cameron, 1905: p. 20.

Pycnostigmus rostratus Cameron, 1905: p. 21.

Types

Lectotype (designated by Weld, 1952): South Africa, Cape Town, ♀ (BMNH); paralectotype: South Africa, Cape Town, ♀ (SAM).

Labels

Type [red bordered disc]. B.M.TYPE/ HYM./ 7.1.; *Pycnostigmus/ rostratus/* Cam. Type/ Cape Town [in Cameron's hand]; Cameron Coll./ 1906-138. [lectotype ♀].

Holotype. Cape T./ 9-87 [September 1887]; SAM-HYM-P002866; *Pycnostigmus/ rostratus* Cam./ Type Cape Town [in Cameron's hand]. [paralectotype ♀].

Condition

The lectotype has the gaster disarticulated, right antenna missing beyond the sixth segment, left antenna missing beyond the 11th segment, right hind wing missing, and the apices of the other wings are torn or have small pieces missing.

Discussion

It is unfortunate that in this case, following the rules of nomenclature, the specimen that is now the primary type is not in the SAM and is not the specimen in the best condition. However, the provisions of the ICZN code are clear. Fortunately since both type specimens are conspecific no name change is required and there is no effect on nomenclature.

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